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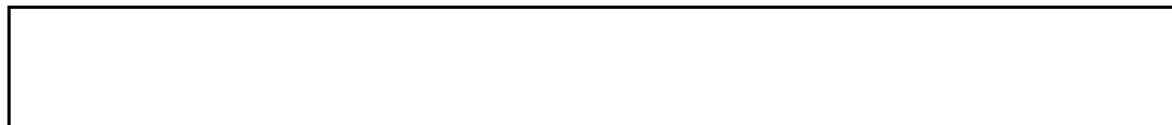
PHOTOGRAPHIC INTELLIGENCE REPORT

CHAN-CHIANG (FT. BAYARD)

PHOSPHATE FERTILIZER PLANT

CHINA

Declass Review by NIMA/DOD



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CIA/PIR 75053

DATE November 1966

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GROUP 1  
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CHAN-CHIANG (FT. BAYARD) PHOSPHATE FERTILIZER PLANT  
CHINA

The phosphate fertilizer plant is located approximately 1.5 nautical miles south-southeast of the center of Chan-chiang complex at 21 10N - 110 22E (Figures 1 and 2).

The plant is both rail and road served and appears to be a component of an expanding chemical complex which presently contains a water purification facility and at least one other chemical plant under construction (Figure 6).

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This study was made from both overflight and satellite photography covering the period [REDACTED]. The following is a brief description of the process used at this plant in the production of fertilizer.

Phosphate ore is brought into the plant by rail and then processed, crushed and stored. The crushed ore is treated with sulfuric acid from the adjacent acid plant in the mixing section to form an acid-rock slurry. The slurry is then placed in large concrete vats or dens for several hours in order to allow completion of the acid reaction. The raw superphosphate from the den section is then placed in the curing section where it is thoroughly dried and cured for several weeks. From the curing section, the superphosphate is conveyed to the final processing building where it is crushed, bagged and stored for shipment.

At this particular plant, it appears possible that part of the phosphate ore could be treated with concentrated sulfuric acid to produce phosphoric acid by the wet process. If this is the case, triple superphosphate could also be made at this plant by treating the crushed ore with phosphoric acid rather than sulfuric acid in a process which closely parallels that for the production of superphosphate.

The following list of areas and plant facilities are keyed to the annotated photo enlargement, Figure 6:

## AREA 1

## Fertilizer Production

- |   |   |
|---|---|
| a. Ore receiving point  | e. Den and curing building  |
| b. Ore processing and storage                                     | f. Probable by-products processing and possible phosphoric acid processing building |
| bl. Probable fertilizer storage                                   | g. Final processing and fertilizer warehouse  |
| c. Crushing building  |   |
| d. Mixing section and possible phosphoric acid production section |   |

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AREA 2  
Contact Sulfuric Acid Production

- |  |                  |
|--|------------------|
| h. Waste disposal                      | l. Cooling coils |
| i. Ore processing and storage (pyrite) | m. Acid storage  |
| j. Roaster section                     | n. Air intake    |
| k. Tower and converter section         |                  |

AREA 3 - Unidentified Chemical Plant Under Construction

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AREA 4 - Water Purification Facility

AREA 5 - Open Storage Area

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Photography [ ] showed the Chan-chiang phosphate fertilizer plant to be in early to mid-stage of construction. The only buildings completed at that time were the ore storage/fertilizer warehouse and several of the support buildings. By [ ] Figure 3, construction on the den and curing building, the final processing and fertilizer warehouse, and additional support buildings had been completed. Also, construction on the sulfuric acid plant was estimated to be in mid-stage. Photo coverage [ ] indicated that all of the major components of the plant were completed and operational. Only minor construction activity on support type buildings was being carried on, Figure 4. [ ] all construction appeared complete, and a shed-type building at the phosphate ore receiving point had been removed, Figures 5 and 7. Small scale and obliquity precluded determination of the production activity at this time. Coverage [ ] clearly shows the plant to be complete and operating at a high level of production, Figure 6.

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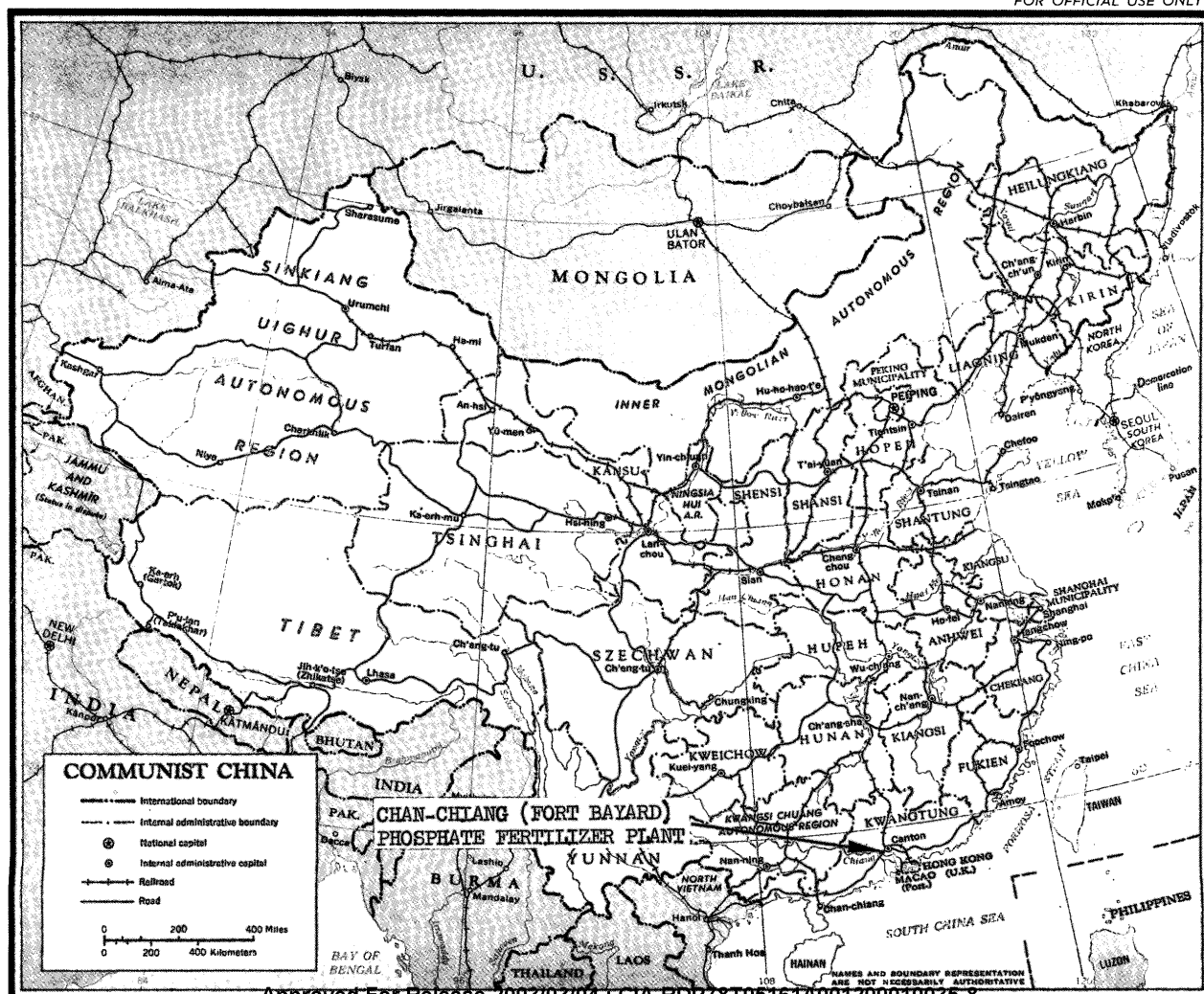


FIGURE 1

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FIGURE 3



PHOSPHATE FERTILIZER PLANT  
CHAN-CHIANG (FORT BAYARD)  
CHINA  
21 10N - 110 22E

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FIGURE 4

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PHOSPHATE FERTILIZER PLANT  
CHAN-CHIANG (FORT BAYARD)  
CHINA

21 10N - 110 22E

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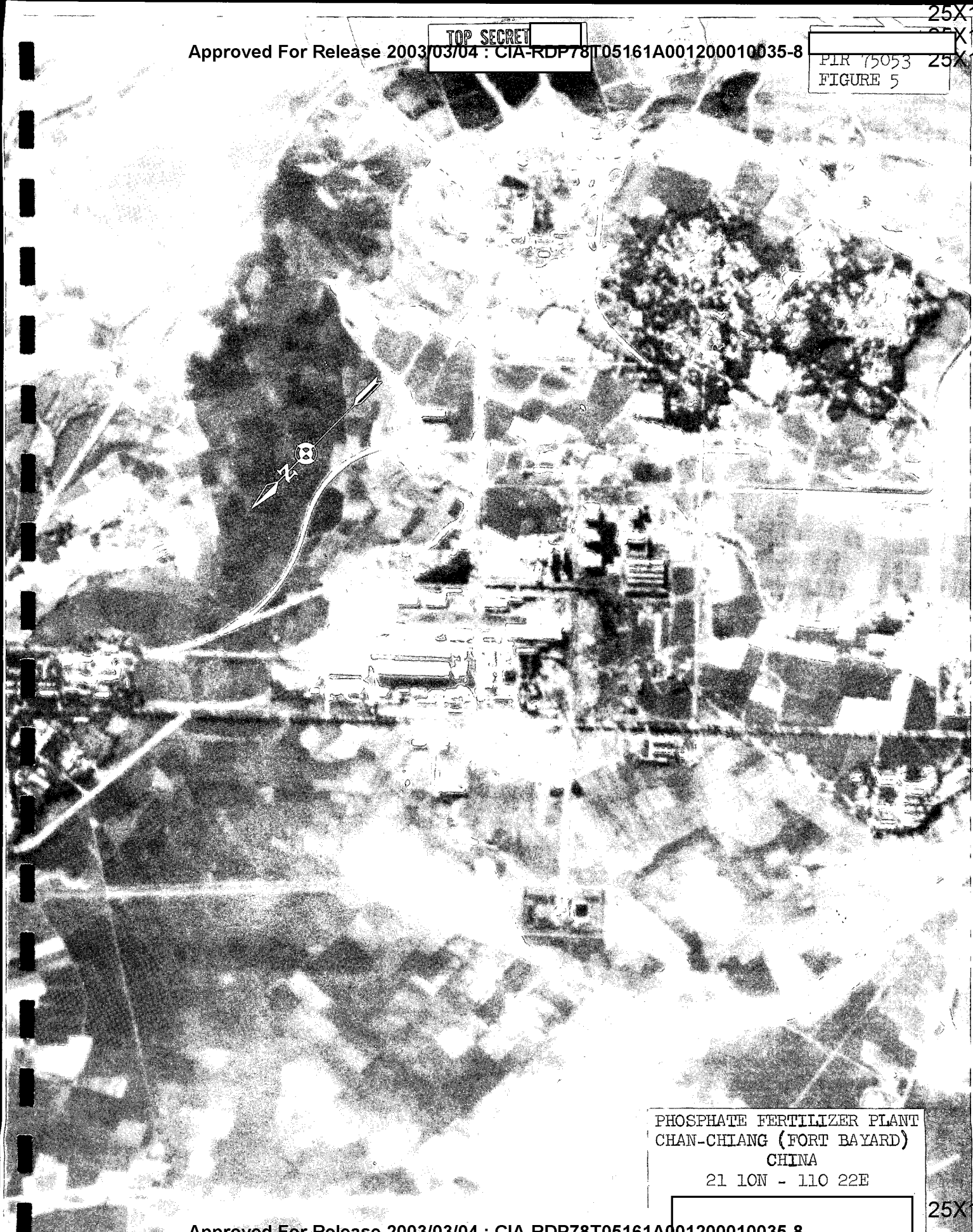
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FIGURE 5

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PHOSPHATE FERTILIZER PLANT  
CHAN-CHIANG (FORT BAYARD)  
CHINA

21 10N - 110 22E

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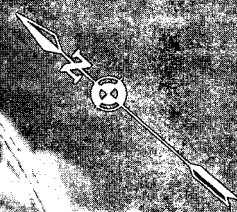
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FIGURE 7

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PHOSPHATE FERTILIZER PLANT  
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21 10N - 110 22E

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# REFERENCES

## MAPS AND CHARTS

Locator Map, China, 51543, 6-65 (Official Use Only)

ACIC, U.S. Air Target Chart, Series 200, Sheet 0615-18HL, 2nd Edition,  
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## REQUIREMENT

C-RR5-83,036

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